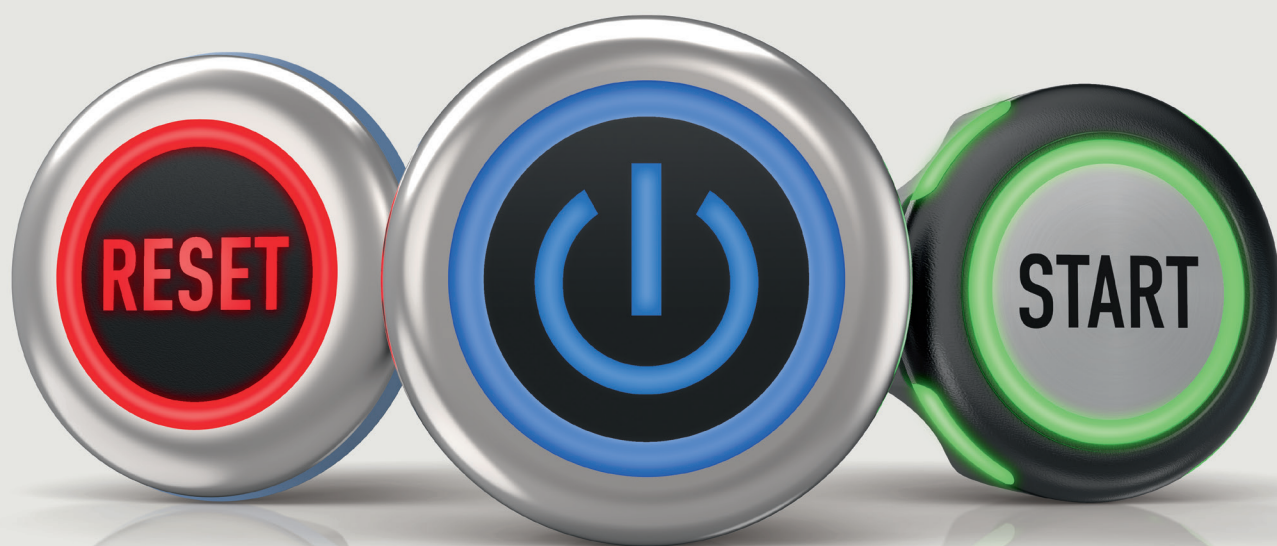


Series

84

Capacitive sensor switch with IO-Link.

www.eao.com/84



Series 84

Capacitive sensor switch with IO-Link.

Switch into Industry 4.0 – the freely configurable, bright and capacitive sensor switch opens up numerous new HMI application possibilities for a wide range of harsh industrial environments.

With the advent of digitisation in the industrial sector, machine manufacturers can develop completely new machines and equipment. At the same time, this creates an even more intensive operating experience for the end user.

However, to reap the benefits of digitisation, machine manufacturers must overcome demanding challenges, for instance in terms of system complexity or the enormous investment of time and money required to digitally transform their analogue machines. With the Series 84 sensor switch with IO-Link, digital machine systems can be equipped and operated with HMIs easily and rapidly.

Simply digitally networked

Thanks to the globally established IO-Link communication interface and programmable connection options, the innovative HMIs can be networked with an advanced machine system via an integrated M12 5-pin screw connection with a mounting depth of just 25.8 mm, making your equipment Industry 4.0-compatible.



Capacitive and freely configurable

The many potential uses for the HMIs are based on a freely selectable configuration which can be precisely aligned to the respective application – from illumination, to symbols, to the switching function. For example, the illumination can switch on with a deliberate delay when actuated. Or HMI operational readiness can be signalled by green illumination which changes to yellow when actuated, and to red a few seconds later. The configuration remains stored on the HMI even with no power supplied.

Robust, fully encapsulated construction

Thanks to fully encapsulated electronic switching technology, actuation does not trigger any mechanical movement. As a result, the capacitive sensor switch can reliably withstand up to 100 million switching cycles, hard impact (IK08) and frontal impact (IP69K) – in operating temperatures ranging from –30 to +65 degrees.

Innovative RGB LED illumination

The static or flashing RGB LED illumination in up to 16 million colours is particularly bright. Thanks to the integrated ambient light level sensor, the HMI always illuminates at the right intensity in any lighting conditions – without dazzling or being too dim. This feature also optimises the HMI power consumption as well as LED lifetime. Four lateral illuminated windows integrated into the front frame ensure excellent visibility of the entire status display. Combined with high-contrast and optionally illuminated standard or custom symbols, the attractive design of the sensor switch means it also integrates visually in any modern application setting.

Flexible switching function and capacitive actuation

Almost all operating and electrical parameters can also be freely configured, from capacitive actuation sensitivity and minimum actuation time to the switching function (PNP-NO, PNP-NC, NPN-NO, NPN-NC). This flexibility enables capacitive operation even for example when the operator is wearing gloves and prevents the permeation of water triggering any unintentional operation.

Advantages.

- Capacitive actuation with different actuation sensitivities
- Freely configurable HMIs with IO-Link interface (Industry 4.0)
- Optionally illuminated standard or custom symbols
- Ambient light adaptive RGB LED illumination in 16 million colours
- EAO Value Added Services and worldwide availability

Certification and conformity

- CSA certification
- EHEDG certification, European Hygienic Engineering and Design Group (food industry approval)

Application-specific HMI variants

With its three HMI variants – Standard, Stainless Steel and Hygiene – the range of sensor switches offers actuators and indicators which are ideal for a wide range of applications in the mechanical engineering industry and far beyond.

Typical applications

- Industrial equipment
 - Automated production (smart factories)
 - Controls and switch cabinets
 - Food and beverage industry
 - Packaging equipment
- Lifting and moving
 - Autonomous robot transport systems
 - Monitoring stations for industrial conveyor belts
- Other applications
 - Mobile, medical devices
 - Transmission systems for telecommunications
 - Video router systems

EAO – your expert partner for HMIs

EAO has a global production and distribution network at its disposal. EAO has production sites in Switzerland, Germany, North America and China, as well as 10 wholly owned international sales companies and distributors in over 50 countries, so we can guarantee global availability – around the world, around the clock. EAO manufactures one of the world's largest ranges of HMI products. With decades of experience, we have the knowledge and the skills to satisfy any application or product requirement.

Further information is available at
www.eao.com/84



Product variant "Standard".



Product variant "Stainless Steel".



Product variant "Hygiene".

Technical data and standard symbols.

Electrical characteristics

- Operating voltage
DC 24 V (8.4 ... 32 V)
- Load current
max. 200 mA
- Output
Adjustable PNP / NPN; NO / NC
- Output pulse duration
Adjustable
- Reverse polarity protection
Protection of all lines
- Short circuit protection
Short-circuit and overload protected
- Voltage drop
max. 5 V at 200 mA
- Current consumption at 24 V
max. 40 mA

Ambient conditions

- Operating temperature
−30 °C ... +65 °C
- Relative humidity
max. 95 %, non-condensing

Front protection

- IP69K max. unevenness of the mounting surface < 0.1 mm

Impact resistance

- IK08

Mechanical characteristics

- Communication interface
IO-Link specification V1.1
- Control voltage E1 / E2
on 80 % U_{V+} , off 0 ... 20 % U_{V+}
- Measuring principle
Capacitive
- Type of actuation
Touch
- Actuating force
No actuating force necessary
- Max. altitude
2000 metres above normal zero at «CSA Listing»

Material

- Seal
Plastic
- Housing
 - Plastic transparent/black
 - Stainless steel (SUS 316L)

Standards

- DIN EN 61010 / DIN EN 60947-5-1

Standard symbols (examples)

				
Symbol B10	Symbol B11	Symbol B12	Symbol B13	Symbol B14
				
Symbol C17	Symbol C18	Symbol C12	Symbol C19	Symbol C16

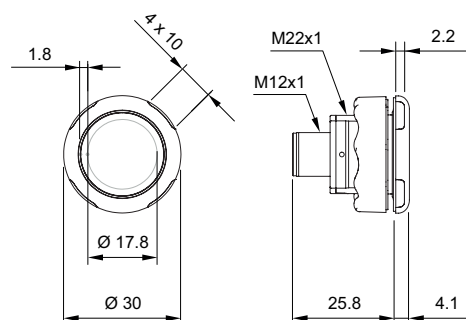
Please note

- BXX symbols are illuminated
- CXX symbols are printed on
- Further standard symbols and also customised symbols possible

Dimensions and mounting cut-outs.

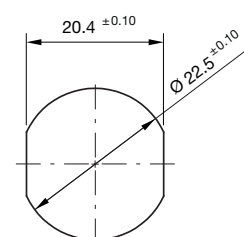
Dimensions

Product variant "Standard"

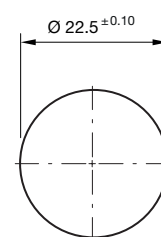
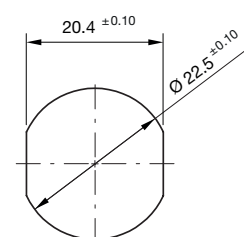


Mounting cut-outs

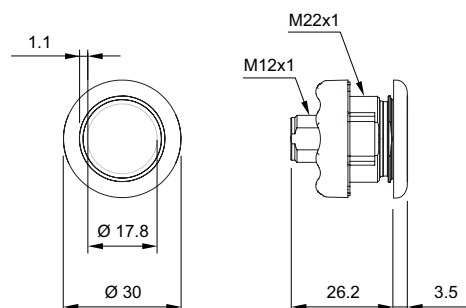
Product variants "Standard" and "Hygiene"



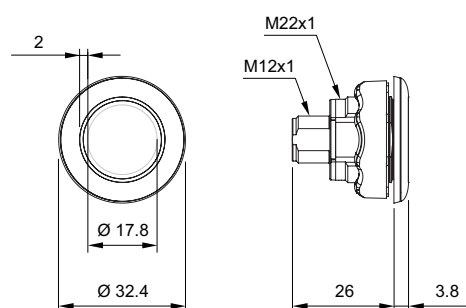
Product variant "Stainless Steel"



Product variant "Stainless Steel"



Product variant "Hygiene"

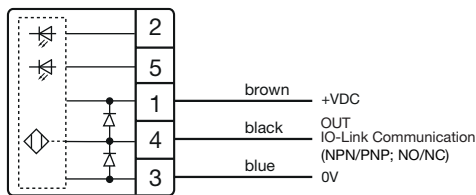


All dimensions in mm.

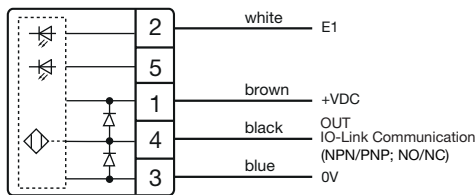
Diagrams and component layouts.

Wiring diagrams

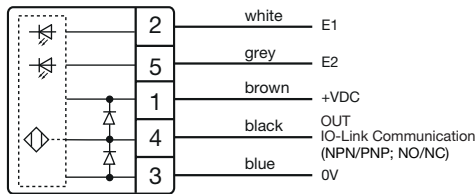
Connection plan 3-pin



Connection plan 4-pin

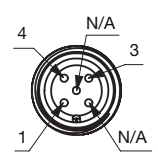


Connection plan 5-pin

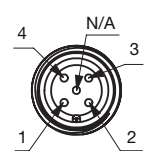


Component layouts

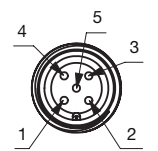
Plug M12 3-pin



Plug M12 4-pin



Plug M12 5-pin



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